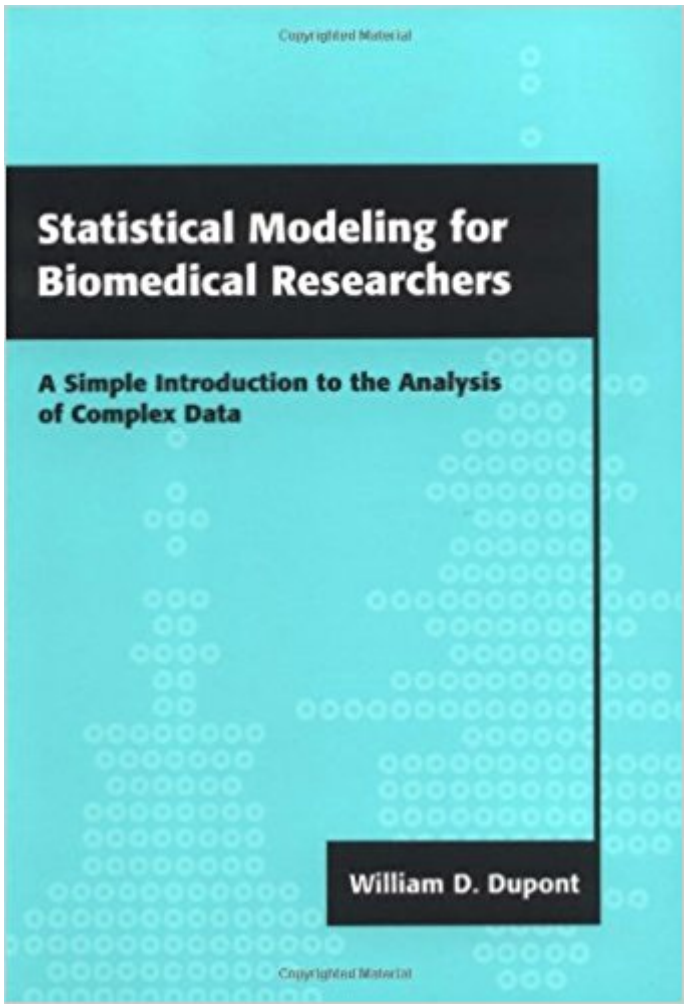
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Statistical Modeling For Biomedical Researchers: A Simple Introduction To The Analysis Of Complex Data



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Synopsis

This text enables biomedical researchers to use a number of advanced statistical methods that have proven valuable in medical research, and uses a statistical software package (StataÃ Â®) to avoid mathematics beyond the high school level. Intended for people who have had an introductory course in biostatistics, the volume emphasizes the assumptions underlying each method, using exploratory techniques to determine the most appropriate method. It presents results in a way that will be readily understood by clinical colleagues. Numerous real examples from medical literature and graphical methods are used to illustrate these techniques.

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Customer Reviews

" I believe the book is user friendly...I also like the book's approach of using problem-based learning, accompanied by explanatory text...One of the most helpful features of this text is the collection of excellent examples included in each chapter...In conclusion I highly recommend [this book]." TSHS

This text will enable biomedical researchers to use a number of advanced statistical methods that have proven valuable in medical research. It is intended for people who have had an introductory course in biostatistics. A statistical software package (Stata) is used to avoid mathematics beyond the high school level. The emphasis is on understanding the assumptions underlying each method, using exploratory techniques to determine the most appropriate method, and presenting results in a

way that will be readily understood by clinical colleagues.

In general, there are 3 types of books on statistics: (1) Those that describe general statistical methods (2) those that describe specific (esoteric) models, and (3) those that teach "how to" implement statistical models in specific software packages.In this book, William D. Dupont does an excellent job of providing sufficient descriptions of each of the major statistical modeling approaches along with the specific Stata software commands to make this a rather complete book. Topics include simple and multiple regression models of the various types (linear, logistic, Poisson) as well as survival and longitudinal modeling approaches.While as an experienced researcher these concepts are not new to me, what I found the most helpful was Dr. Dupont’s thoughtful approach to choosing, testing, and displaying the results of each method. On countless occasions I found myself thinking "huh, that was a clever idea."This book can serve as an excellent text for an intermediate biostatistics course (preferably a class that uses Stata), as well as serve as a resource to experienced researchers who may want to find streamlined approaches to implementing these models in Stata.

This is a highly recommended book if you are trying to use Stata in biomedical research. This covers most of the standard procedures (t-tests, linear regression, multiple comparisons, logistic and other contingency table methods, Cox PH, Poisson (log-linear), GEE) and a reasonable amount of noncalculus statistical formula derivation to show what goes on inside the box. ANOVA is relegated to the back of the book, because in the author’s opinion, the amount of control needed to pull off these studies is not normally feasible and GLM can cover the same ground. There isn’t any other book that addresses GEE as comprehensively as this book. The Vittinghoff book is also recommended as a companion piece to give a more in-depth approach to regression topics.

If you are working with Stata this book will be a good help to understand the basic concepts of the multivarite analysis.

Dupont’s "Statistical Modeling for Biomedical Researchers" is an accessible, straightforward, easy-to-read text for students and/or researchers w/ some elementary background in biostatistics. As previous reviewers have indicated, this is largely a problem-based text, so for those of you who seek a detailed theoretical explanation of the tools presented therein, you may want to look elsewhere. A major advantage, however, is Dupont’s presentation of how to run the respective

analyses using the statistical software package, Stata, although it should be noted that the syntax presented is for version 7 of Stata -- not version 8. Parenthetically, all of the code -- w/ the exception of the graphing commands -- are essentially the same between versions. In short, this text is a good introduction to some of the techniques typically not discussed in an elementary biostatistics course, although the book is best characterized as an invaluable adjunct to more theoretical, comprehensive biostatistics textbooks.

I have had the pleasure of using this book during a biostatistics level two course this year. The book is structured to assist in the course work in statistics using STATA. It is user friendly and gives mathematical explanations when appropriate but without losing the reader with too many equations. The book's approach uses problem based learning along with explanatory text which I found essential in learning to navigate STATA along with learning and understanding logistic regression, poisson regression etc. The best aspect of the book is the STATA output to assist with the problem solving. The book is a very good choice as an interactive tool for understanding advanced statistics using STATA.

As a non-statistician with some stat background, I find Dupont book a delightful book. It is packed with interesting and useful information. It starts at t-test and ends with GEE models, covering Cox model with time covariates along the way. But as the author noted, the book assumes some statistical knowledge and access to STATA maual. One minor note: While the book introduction asserts that it only assumes "high school mathematics" knowldege, the high school the author attended must be very different than the one I went to.

This text is especially valuable because it is written in clear and concise language. It thus serves the needs of the biostatistical community while remaining accessible to the non-biostatistician. The latter is what is so often lacking in textbooks in this discipline. The new 2009 edition builds on and adds to the strengths of the first. As a clinical investigator, I turn to this first when I have a complex data issue that I need clarification about.

I used this book as the text for a biostatistics class that used STATA as the statistitical package. I found the organization, problems, and the STATA output the book provides, all very helpful. In addition, as I moved systematically through the book, the tips regarding using the STATA features were key to my learning many of the practical aspects of the STATA program.

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